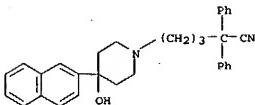


11/08/04

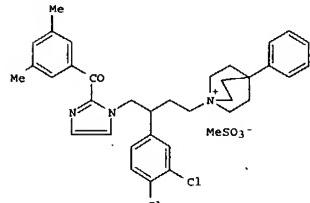
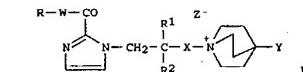
L4 ANSWER 10 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)
 CN 1-Piperidinopentanenitrile, 4-hydroxy-4-(2-naphthalenyl)- α , α -diphenyl-, monohydrochloride (9CI) (CA INDEX NAME)



● HCl

RE.CNT 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 11 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN
 GI



II

AB Quaternary quinuclidines I [R = aryl, alkyl, heteroaryl; R1 = H, alkyl;
 R2 = aryl such as Ph, naphthyl, thienvyl, indolyl, etc.; W = bond, CH2,
 CH2CH2; X = linking alkylene; Y = aryl, benzyl, heteroaryl, cycloalkyl; Z =
 pharmaceutically acceptable anion, such as $MeSO_3^-$, Cl^- , etc.] were
 prepared for use as tachykinin antagonists. Thus, II was prepared via
 reaction of 4-phenylquinuclidine with 1-methanesulfonfyl-4-(2-(3,5-dimethylbenzoyl)imidazol-1-yl)butane in MeCN
 under reflux for 4 h. Some of the prepared compds. were tested for human
 NK1 and NK2 receptor binding affinity.
 1999:9851 CAPLUS
 130:52617
 Preparation of quaternary ammonium compounds as tachykinin antagonists
 Monaghan, Sandra Marina; Alker, David; Burns, Christopher John
 Pfizer Limited, UK; Pfizer Inc.
 PCT Int. Appl., 131 pp.
 CODEN: PIXXD2
 Patent
 English
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9857972	A1	19981223	WO 1998-EP1500	19980605
W: AU, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL				

L4 ANSWER 11 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)
 PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ,
 VN, YU, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MM, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES,
 FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SF, RJ, CF, CG, CI,
 CM, GA, GN, ML, MR, NE, SN, TD, TG

TW 479055 B 20020311 TW 1998-87107720 19980519

AU 9882153 A1 19990101 AU 1998-82153 19980605

AU 726027 B2 20001026 19980605

TR 9903135 T2 20000421 TR 1999-9903135 19980605

EP 994876 A1 20000426 EP 1998-932148 19980605

EP 994876 B1 20040908

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, PT, IE,
 SI, LT, LV, FI, RO

NZ 501286 A 20000728 NZ 1998-501286 19980605

BR 9810619 A 20000912 BR 1998-10619 19980605

JP 2000511030 T2 20001003 JP 1999-503687 19980605

JP 3280993 B2 20020513 19980605

SK 283346 B6 20030603 SK 1999-1744 19980605

AT 275564 E 20040915 AT 1998-932148 19980605

AP 947 A 20010308 AP 1998-1262 19980611

W: BW, GM, KE, MW, UK, ZM, ZW

ZA 9805239 A 19991217 ZA 1998-5239 19980617

HR 980337 B1 20030228 HR 1998-980337 19980618

BG 103919 A 20010731 BG 1999-103919 19991123

BG 63341 B1 20010310 19991123

NO 9905782 A 20000216 NO 1999-5782 19991125

MX 9912096 A 20000430 MX 1999-12096 19991217

US 6207678 B1 20010327 US 2000-380370 20000424

US 6380396 B1 20020430 US 2000-734266 20001211

PRA: GB 1997-12862 A 19970618

WO 1998-EP3500 W 19980605

WO 1998-B3500 W 19980606

US 2000-380370 A3 20000424

OS MARPAT 130:52617

IT 217431-96-4P RL: BAC (Biological activity or effector, except adverse); BSU

(Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use);

BIOI (Biological study); PREP (Preparation); USES (Uses)

(preparation of quaternary ammonium compds. as tachykinin antagonists)

RN 217431-96-4 CAPLUS

CN 1-Azoniabicyclo[2.2.2]octane, 1-[3-(3,4-dichlorophenyl)-4-(2-(2-

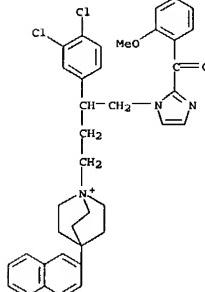
methoxybenzoyl)-1H-imidazol-1-yl]butyl]-4-(2-naphthalenyl)-, methanesulfonate (9CI) (CA INDEX NAME)

CM 1

CRN 217431-95-3

CMF C38 H38 Cl2 N3 O2

L4 ANSWER 11 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



CMR 16053-58-0

CMF C H3 O3 S



IT 217431-97-5P 217431-98-6P 217431-99-7P

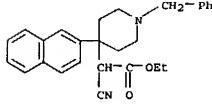
IT 217432-01-4P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation of quaternary ammonium compds. as tachykinin antagonists)

RN 217431-97-5 CAPLUS

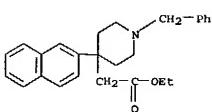
CN 4-Piperidineacetic acid, α -cyano-4-(2-naphthalenyl)-1-(phenylmethyl)-, ethyl ester (9CI) (CA INDEX NAME)



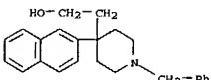
10/722, 114

11/08/04

L4 ANSWER 11 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)
RN 217431-98-6 CAPLUS
CN 4-Piperidineacetic acid, 4-(2-naphthalenyl)-1-(phenylmethyl)-, ethyl ester (9CI) (CA INDEX NAME)



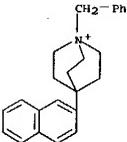
RN 217431-99-7 CAPLUS
CN 4-Piperidineethanol, 4-(2-naphthalenyl)-1-(phenylmethyl)- (9CI) (CA INDEX NAME)



RN 217432-01-4 CAPLUS
CN 1-Azoniabicyclo{2.2.2}octane, 4-(2-naphthalenyl)-1-(phenylmethyl)-, salt with 4-methylbenzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

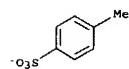
CM 1

CRN 217432-00-3
CMF C24 H26 N



CM 2

L4 ANSWER 11 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)
RN 16722-51-3
CNF C7 H7 O3 S



RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 12 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)
AB The CC chemokines macrophage inflammatory protein-1 α (MIP-1 α) and RANTES (regulated on activation normal T cell expressed) have been implicated in rheumatoid arthritis and multiple sclerosis. Since their effects are mediated through the CCR1 chemokine receptor, we set up a small mol. CCR1 antagonist program to search for inhibitors. Through high capacity screening we discovered a number of 4-hydroxypiperidine compds.

with CCR1 antagonist activity and report their synthesis and in vitro pharmacol. here. Scatchard anal. of the competition binding data revealed that the compds. had Kd values ranging from 40 to 4000 nM. The pharmacol. profile of the most potent member of this series, (2,2-diphenyl-5-(4-chlorophenyl)piperidinyl)valeronitrile (I), was further evaluated. Compound I showed concentration-dependent inhibition of MIP-1 α -induced extracellular acidification and Ca2+ mobilization demonstrating functional antagonism. When given alone, the compound did not elicit any responses, indicating the absence of intrinsic agonist activity. Compound I inhibited MIP-1 α - and RANTES-induced migration in peripheral blood mononuclear cells in a dose-responsive manner. Selectivity testing against a panel of seven transmembrane domain receptors indicated that compound I is inactive on a number of receptors at concns. up to 10 μ M. This is the first description of CCR1 receptor antagonists that may be useful in the treatment of chronic inflammatory diseases involving MIP-1 α , RANTES, and CCR1.

AN 1998:400595 CAPLUS

DN 129:144656

TI Identification and characterization of small molecule functional antagonists of the CCR1 chemokine receptor

AU Hesselsberger, Joseph; Ng, Howard P.; Liang, Meina; Zheng, Wei; May, Karen;

Bauman, John G.; Monahan, Sean; Islam, Imadul; Wei, Guo Ping; Ghannam, Ameen; Taub, Dennis D.; Rosser, Mary; Snider, R. Michael; Morrissey, Michael M.; Perez, H. Daniel; Horuk, Richard

CS Department of Immunology, Berlex BioSciences, Richmond, CA, 94806, USA

SO Journal of Biological Chemistry (1998), 273(25), 15687-15692

CODEN: JBCHA3; ISSN: 0021-9258

PB American Society for Biochemistry and Molecular Biology

DT Journal

LA English

IT 210815-63-7P

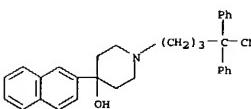
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)

(preparation and characterization of 4-hydroxypiperidine compds. as functional antagonists of CCR1 chemokine receptor)

RN 210815-63-7 CAPLUS

CN 1-Piperidinopentanenitrile, 4-hydroxy-4-(2-naphthalenyl)- α,α -diphenyl- (9CI) (CA INDEX NAME)

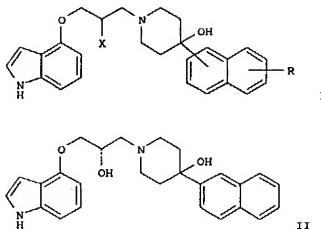
L4 ANSWER 12 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



RE.CNT 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

11/08/04

L4 ANSWER 13 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN
GI



AB A series of title compds. I [X = H, OH; R = H, OH, cyano, alkyl, alkenyl, alkynyl, aryl, alkoxy, aryloxy, arylalkenyl, alkyl/aryl-thio/sulfonyl, NR1R2, CONR1R2; n = 0, 1, 2; R1, R2 = H, alkyl, Ph; or NR1R2 = pyrrolidino, piperidino, or 4-R3-piperazine; R3 = H, alkyl, Ph, or alkoxycarbonyl] and their pharmaceutically acceptable salts are disclosed. The compds. are effective pharmaceuticals for the treatment of conditions related to or affected by the reuptake of serotonin, and by the serotonin 1A receptor, yet they lack mutagenic potential as measured by assays of chromosomal aberration (no data). The compds. are particularly useful for alleviating the symptoms of nicotine and tobacco withdrawal, and for the treatment of depression and other conditions for which serotonin reuptake inhibitors are used. Some I are said to show serotonin reuptake inhibitory activity in the low nM range. Nineteen synthetic examples and 23 precursor preps. are given. For instance, N-alkylation of 4-hydroxy-4-(naphth-2-yl)piperidine with (S)-(+) -4-(oxiranylmethoxy)-1H-indole (preps. given) in refluxing MeOH gave 70% title compound II, which was also isolated as the oxalate.

AN 1998-31206 CAPLUS

DN 128:88790

TI Preparation of 1-(4-indolyl)oxy-3-(4-hydroxy-4-naphthyl)piperidin-1-ylpropane derivatives having effects on serotonin-related systems

IN Koch, Daniel J.; Rocco, Vincent P.

PA Eli Lilly and Co., USA

SO PCT Int. Appl., 55 pp.

CODEN: PIXXD2

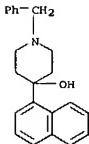
DT Patent

LA English

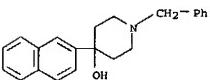
FAN.CNT 1

PATENT NO. KIND DATE APPLICATION NO. DATE

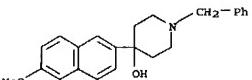
L4 ANSWER 13 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



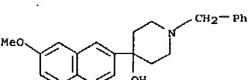
RN 188862-05-7 CAPLUS
CN 4-Piperidinol, 4-(2-naphthalenyl)-1-(phenylmethyl)- (9CI) (CA INDEX NAME)



RN 200875-18-9 CAPLUS
CN 4-Piperidinol, 4-(6-methoxy-2-naphthalenyl)-1-(phenylmethyl)- (9CI) (CA INDEX NAME)



RN 200875-19-0 CAPLUS
CN 4-Piperidinol, 4-(7-methoxy-2-naphthalenyl)-1-(phenylmethyl)- (9CI) (CA INDEX NAME)



RN 200875-20-3 CAPLUS
CN 4-Piperidinol, 4-(6-ethoxy-2-naphthalenyl)-1-(phenylmethyl)- (9CI) (CA INDEX NAME)

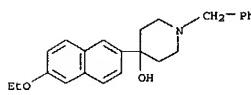
L4 ANSWER 13 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

PI WO 9748698 A1 19971224 WO 1997-US10603 19970619
W: AL, AM, AU, AZ, BA, BB, BG, BR, BY, CA, CN, CU, CZ, EE, GE, GH,
HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LV, MD,
MG, MK, MN, MW, MX, NO, NZ, PL, RO, RU, SD, SG, SI, SK, SL, TJ,
TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD,
RU, TJ, TM
RW: GH, KE, LS, MM, SD, SZ, UG, ZW, BF, BJ, CF, CG, CI, CR, GA, GN,
ML, MR, NE, SN, TD, TG
US 5912256 A 19990615 US 1997-861445 19970522
EP 814084 A1 19971229 EP 1997-304280 19970618
EP 814084 B1 20010808
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, PT, IE,
FI, RO
AT 203990 E 20010815 AT 1997-304280 19970618
ES 2160894 T3 20011116 ES 1997-304280 19970618
CA 2257962 AA 19971224 CA 1997-2257962 19970619
AU 9734017 A1 19980107 AU 1997-34017 19970619
JP 2000513358 T2 20001010 JP 1998-503318 19970619
HK 1008525 A1 20020315 HK 1998-108777 19980629
GR 3037072 T3 20020313 GR 2001-401944 20011030
PRA1 US 1996-20131P F 19960620
WO 1997-US10603 W 19970619
OS MARPAT 128:88790
IT 130305-57-6P 1-Benzyl-4-hydroxy-4-(naphth-1-yl)piperidine
108862-05-7P 1-Benzyl-4-hydroxy-4-(naphth-2-yl)piperidine
200875-18-9P 1-Benzyl-4-hydroxy-4-(6-methoxynaphth-2-
yl)piperidine 200875-19-0P 1-Benzyl-4-hydroxy-4-(7-
methoxynaphth-2-yl)piperidine 200875-20-3P 1-Benzyl-4-hydroxy-4-(
(6-ethoxynaphth-2-yl)piperidine 200875-21-4P,
1-Benzyl-4-hydroxy-4-(6-propoxynaphth-2-yl)piperidine 200875-22-5P
, 1-Benzyl-4-hydroxy-4-(6-isopropoxynaphth-2-yl)piperidine
200875-23-6P, 1-Benzyl-4-hydroxy-4-(6-hexyloxy)naphth-2-
yl)piperidine 200875-24-7P, 1-Benzyl-4-hydroxy-4-(6-
(phenethoxy)naphth-2-yl)piperidine 200875-26-9P,
1-Benzyl-4-hydroxy-4-(6-hydroxynaphth-2-yl)piperidine
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(intermediate; preparation of
(indolyl)oxy)hydroxynaphthylpiperidinylpropan
e derivs. as serotoninergic agents and reuptake inhibitors)

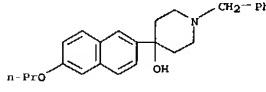
RN 130305-57-6 CAPLUS

CN 4-Piperidinol, 4-(1-naphthalenyl)-1-(phenylmethyl)- (9CI) (CA INDEX NAME)

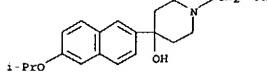
L4 ANSWER 13 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



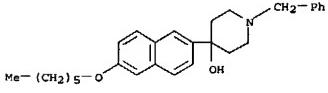
RN 200875-21-4 CAPLUS
CN 4-Piperidinol, 1-(phenylmethyl)-4-(6-propoxy-2-naphthalenyl)- (9CI) (CA INDEX NAME)



RN 200875-22-5 CAPLUS
CN 4-Piperidinol, 4-[6-(1-methylethoxy)-2-naphthalenyl]-1-(phenylmethyl)- (9CI) (CA INDEX NAME)



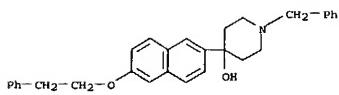
RN 200875-23-6 CAPLUS
CN 4-Piperidinol, 4-[6-(hexyloxy)-2-naphthalenyl]-1-(phenylmethyl)- (9CI) (CA INDEX NAME)



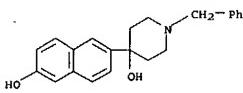
RN 200875-24-7 CAPLUS
CN 4-Piperidinol, 4-[6-(2-phenylethoxy)-2-naphthalenyl]-1-(phenylmethyl)- (9CI) (CA INDEX NAME)

11/08/04

L4 ANSWER 13 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



RN 200875-26-9 CAPLUS
CN 4-Piperidinol, 4-(6-hydroxy-2-naphthalenyl)-1-(phenylmethyl)- (9CI) (CA INDEX NAME)



(Continued)

AB New piperidine and azabicyclooctane derivs. (> 1000 compds.) are renin inhibitors for treatment of high blood pressure, heart and kidney insufficiency. Thus, the piperidine derivative I was prepared from 1-benzyl-3-propyl-4-piperidinone by reaction with 4-FC6H4Br, followed by 1-benzyloxy-3-chloromethylnaphthalene and deblocking. I had a renin-inhibiting IC₅₀ of 0.317 μM.

AN 1997:307688 CAPLUS
DN 126:277402
TI New 4-aryl-3-aralkoxypiperidines and -azabicyclooctanes for treating heart and kidney insufficiency
IN Bingel, Alfred; Breu, Volker; Bur, Daniel; Fischli, Walter; Gueller, Rolf; Hirth, Georges; Maerki, Hans-Peter; Mueller, Marcel; Oefner, Christian; Stadler, Heinz; Vieira, Eric; Wilhelm, Maurice; Woest, Wolfgang
PA F. Hoffmann-La Roche Ag, Switz.
SO PCT Int. Appl., 492 pp.
CODEN: PIXXD2
DT Patent
LA German
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9709311	A1	19970313	WO 1996-EP3803	19960829
W: AU, BR, CA, CN, CZ, HU, IL, JP, KR, MX, NO, NZ, PL, RU, SG, TR R: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT,				
CA 2230931	AA	19970313	CA 1996-2230931	19960829
AU 9667432	A1	19970327	AU 1996-67432	19960829
AU 708616	B2	19990805		
EP 863875	A1	19980916	EP 1996-927715	19960829
EP 863875	B1	20030604		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, NL, SE, MC, PT, IE, FI				
JP 1202152	A	19981216	CN 1996-197674	19960829
JP 11500447	T2	19990112	JP 1996-510837	19960829
BR 9610385	A	19990706	BR 1996-10385	19960829

L4 ANSWER 14 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

NZ 315677 A 20000228 NZ 1996-315677 19960829
RU 2167865 C2 20010527 RU 1998-106388 19960829
AT 242213 E 20030615 AT 1996-927715 19960829
IL 123293 A1 20030624 IL 1996-123293 19960829
CZ 292327 B6 20030917 CZ 1998-684 19960829
PT 863875 T 20031031 PT 1996-927715 19960829
ES 2201192 T3 20040316 ES 1996-927715 19960829
ZA 9607424 A 19970307 ZA 1996-7424 19960902
TW 474932 B 20020201 TW 1996-85110684 19960902
NZ 9800954 A 19980428 NO 1998-954 19980305
US 6051712 A 20000418 US 1999-255185 19990222
US 6150526 A 20001121 US 1999-456283 19991207

PRAI CH 1995-2548 A 19950907
CH 1996-1876 A 19960726
WO 1996-EP3803 W 19960829
US 1996-711339 A3 19960906
US 1999-255185 A1 19990222

OS MARPAT 126:277402
IT 188861-08-7P 188861-21-4P 188861-25-8P
188862-05-7P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

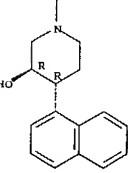
(preparation of piperidine and azabicyclooctane derivs. as renin

inhibitors)

RN 188861-08-7 CAPLUS

CN 3-Piperidinol, 4-(1-naphthalenyl)-1-(phenylmethyl)-, (3R,4R)-rel- (9CI) (CA INDEX NAME)

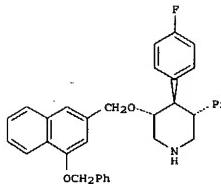
Relative stereochemistry.



RN 188861-21-4 CAPLUS
CN 4-Piperidinol, 4-(1,2-dihydro-5-acenaphthylene)-1-(phenylmethyl)- (9CI) (CA INDEX NAME)

L4 ANSWER 14 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN

GI



I

AB New piperidine and azabicyclooctane derivs. (> 1000 compds.) are renin inhibitors for treatment of high blood pressure, heart and kidney insufficiency. Thus, the piperidine derivative I was prepared from 1-benzyl-3-propyl-4-piperidinone by reaction with 4-FC6H4Br, followed by 1-benzyloxy-3-chloromethylnaphthalene and deblocking. I had a renin-inhibiting IC₅₀ of 0.317 μM.

AN 1997:307688 CAPLUS

DN 126:277402

TI New 4-aryl-3-aralkoxypiperidines and -azabicyclooctanes for treating heart and kidney insufficiency

IN Bingel, Alfred; Breu, Volker; Bur, Daniel; Fischli, Walter; Gueller, Rolf; Hirth, Georges; Maerki, Hans-Peter; Mueller, Marcel; Oefner, Christian; Stadler, Heinz; Vieira, Eric; Wilhelm, Maurice; Woest, Wolfgang

PA F. Hoffmann-La Roche Ag, Switz.

SO PCT Int. Appl., 492 pp.

CODEN: PIXXD2

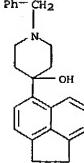
DT Patent

LA German

FAN.CNT 1

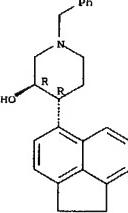
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9709311	A1	19970313	WO 1996-EP3803	19960829
W: AU, BR, CA, CN, CZ, HU, IL, JP, KR, MX, NO, NZ, PL, RU, SG, TR R: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT,				
CA 2230931	AA	19970313	CA 1996-2230931	19960829
AU 9667432	A1	19970327	AU 1996-67432	19960829
AU 708616	B2	19990805		
EP 863875	A1	19980916	EP 1996-927715	19960829
EP 863875	B1	20030604		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, NL, SE, MC, PT, IE, FI				
JP 1202152	A	19981216	CN 1996-197674	19960829
JP 11500447	T2	19990112	JP 1996-510837	19960829
BR 9610385	A	19990706	BR 1996-10385	19960829

L4 ANSWER 14 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

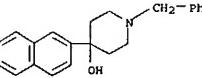


RN 188861-25-8 CAPLUS
CN 3-Piperidinol, 4-(1,2-dihydro-5-acenaphthylene)-1-(phenylmethyl)-, (3R,4R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

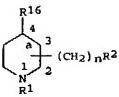


RN 188862-05-7 CAPLUS
CN 4-Piperidinol, 4-(2-naphthalenyl)-1-(phenylmethyl)- (9CI) (CA INDEX NAME)



11/08/04

L4 ANSWER 15 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN
GI



I

AB There is described novel (N-phthalimidooalkyl)piperidines compds. I or a pharmaceutically acceptable salt or an N-oxide thereof [a is a single or double bond, provided that when a is a double bond, R2(CH2)n is attached at C-4 and R16 is not present; n is 1-4, provided that when (CH2)n is attached to the 2-position of the piperidine ring then n is 2-4; R1 is (CH2)mR3 or (CH2)pR4, where m is 1-4 and p is 1-4; R2 is N-phthalimido] which exhibit selective σ-receptor antagonism and therefore are useful in the treatment of physiol. or drug induced psychosis and dyskinesia in a mammal. Also described are pharmaceutical compns. containing

σ selective compds. and methods of using these compns. for treating physiol. or drug induced psychosis or dyskinesia in a mammal. Further provided are methods for preparing the compds. of this invention. KIs in the

1-30 nM range were measured in the in vitro σ-receptor binding assay.

AN 1995:2727442 CAPLUS

DN 122:132986

TI (N-phthalimidooalkyl) piperidines useful as treatments for psychosis

IN Ciganek, Engelbert; Tam, Sang W.; Wright, Ann S.

PA Du Pont Merck Pharmaceutical Co., USA

SO U.S., 41 pp. Cont.-in-part of U.S. Ser. No. 602,024, abandoned.

CODEN: USXXAM

DT Patent

LA English

PAN.CNT 3

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 5356906	A	19941018	US 1992-876542	19920430
IL 96144	A1	19940624	IL 1990-96144	19901028
ZA 9008641	A	19920624	ZA 1990-8641	19901029
WO 9322310	A1	19931111	WO 1993-US3984	19930428
W: AU, BB, BG, BR, CA, CZ, FI, HU, JP, KP, KR, KZ, LK, MG, MN, MW, NO, NZ, PL, RO, RU, SD, SK, UA, VN				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9340345	A1	19931129	AU 1993-40345	19930428
US 5480892	A	19960102	US 1994-298268	19940831
PRAI US 1989-428097		19891027		
US 1990-602024		19901023		
US 1992-876542		19920430		
WO 1993-US3984		19930428		

L4 ANSWER 15 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

OS MARPAT 122:132986

IT 135903-59-2P

RL: BAC (Biological activity or effector, except adverse); BSU

(Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(N-phthalimidooalkyl)piperidines as selective σ-receptor antagonists useful as treatments for psychosis

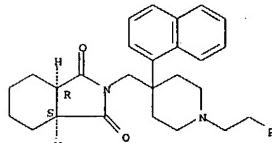
RN: 135903-59-2 CAPLUS

CN 1H-Isoindole-1,3(2H)-dione, hexahydro-2-[(4-(1-naphthalenyl)-1-(2-phenylethyl)-4-piperidinyl)methyl]-, (3aR,7aS)-rel-, (2E)-2-butenedioate (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 135903-58-1
CMF C32 H36 N2 O2

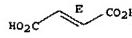
Relative stereochemistry.



CM 2

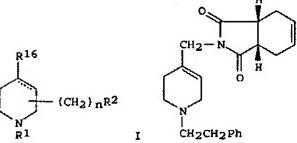
CRN 110-17-8
CMF C4 H4 O4

Double bond geometry as shown.



L4 ANSWER 16 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN

GI



I

II

AB The title compds. I [R1 = cycloalkyl- or aryl-substituted alkyl; R2 = (un)substituted phthalimido, etc.; R16 = OH, alkoxy, alkyl, (un)substituted Ph or naphthyl, etc.; n = 0-4; the dotted line is an optional double bond], which are selective sigma receptor antagonists useful for the treatment of physiol. or drug-induced psychosis and dyskinesia, are prepared and I-containing formulations presented. Thus, 1-(2-phenylethyl)-4-piperidinemethamine was condensed with fumaric acid, producing fumarate II (m.p. 179-181°). II demonstrated guinea pig brain membrane-derived sigma receptor Ki of

31-100

nM and dopamine D-2 receptor of Ki >500 nM, vs. 1-30 and 1-30, resp., for haloperidol.

AN 1994:270118 CAPLUS

DN 120:270118

TI (N-phthalimidooalkyl)piperidine sigma receptor antagonists for the treatment of psychosis

IN Ciganek, Engelbert; Tam, Sang William; Wright, Ann Sorrentino

PA Du Pont Merck Pharmaceutical Co., USA

SO PCT Int. Appl., 129 pp.

CODEN: PIXX22

DT Patent

LA English

PAN.CNT 3

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9322310	A1	19931111	WO 1993-US3984	19930428
W: AU, BB, BG, BR, CA, CZ, FI, HU, JP, KP, KR, KZ, LK, MG, MN, MW, NO, NZ, PL, RO, RU, SD, SK, UA, VN				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
US 5356906	A	19941018	US 1992-876542	19920430
NU 9340345	A1	19931129	AU 1993-40345	19930428
PRAI US 1992-876542		19920430		
US 1989-428097		19891027		
US 1990-602024		19901023		
WO 1993-US3984		19930428		

OS MARPAT 120:270118

IT 135903-58-1 135903-59-2

RL: RCT (Reactant); RACT (Reactant or reagent)

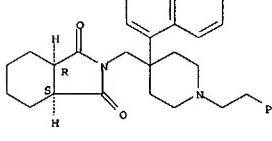
(preparation as antipsychotic Sigma receptor antagonists)

CRN 135903-58-1 CAPLUS

L4 ANSWER 16 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

CN 1H-Isoindole-1,3(2H)-dione, hexahydro-2-[(4-(1-naphthalenyl)-1-(2-phenylethyl)-4-piperidinyl)methyl]-, cis- (9CI) (CA INDEX NAME)

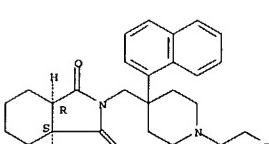
Relative stereochemistry.



CM 1

CRN 135903-58-1
CMF C32 H36 N2 O2

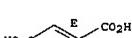
Relative stereochemistry.



CM 2

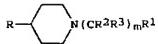
CRN 110-17-8
CMF C4 H4 O4

Double bond geometry as shown.



11/08/04

L4 ANSWER 17 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN
GI



AB The present invention consists of title compds. I ($R = (\text{un})\text{substituted alkyl}$, cycloalkyl, aryl, heterocyclyl; $R_1 = (\text{un})\text{substituted alkyl}$, alkenyl, alkynyl, cycloalkyl, aryl, heterocyclyl; $m = 0-3$; $R_2, R_3 = H$, alkyl, Ph; with the proviso that $R \neq 4\text{-Me}^3\text{C}_6\text{H}_4$) or an acid-addition salt thereof, a process for the preparation of these piperidine derivs., compds., containing such compds., and their use as fungicides. Thus, 4-(4-chlorophenyl)-1,3,5,6-tetrahydropyridine (10.0 g) was hydrogenated over 5% Pd/C in EtOAc (200 mL) to give 99% 4-(4-chlorophenyl)piperidine. The latter compound (2.0 g) was treated with PhCH₂Br (1.22 mL) and K₂CO₃ (4.26 g) in THF (100 mL) to give 76%

N-benzyl-4-(4-chlorophenyl)piperidine

(II). It showed >80% control of powdery mildew on barley seedlings and wheat eyespot at dosages of 1000 and 100 ppm resp.

AN 1992:591696 CAPLUS

DN 117:191696

TI Piperidine derivatives

IN Carter, Paul Andrew; Tapp, Stevens James; Daniels, Nicholas John

PA Shell Internationale Research Maatschappij B. V., Neth.

SO Eur. Pat. Appl., 35 pp.

CODEN: EPXXDW

DT Patent

LA English

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI EP 494717	A1	19920715	EP 1992-200037	19920108
WO 9212130	A1	19920723	WO 1992-EP40	19920108
W: BR, RU, JP, KR, PL, RU, US				
BR 9205423	A	19940315	BR 1992-5423	19920108
HU 65119	A2	19940428	HU 1993-1987	19920108
JP 06506441	T2	19940721	JP 1992-501676	19920108
RU 2097375	C1	19971127	RU 1993-51789	19920108
ZA 9200149	A	19920930	ZA 1992-149	19920109
CN 1063101	A	19920729	CN 1992-100196	19920110
US 5489599	A	19960206	US 1993-81298	19930628

PRAI GB 1991-505

WO 1992-EP40

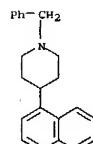
OS MARPAT 117:191696

IT 143867-29-2P 143867-30-5P 143867-32-7P

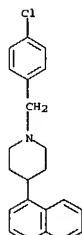
143867-39-4P 143867-41-8P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation) (preparation and fungicidal activity of)

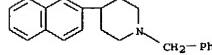
L4 ANSWER 17 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)
RN 143867-29-2 CAPLUS
CN Piperidine, 1-(4-naphthalenyl)-1-(phenylmethyl)- (9CI) (CA INDEX NAME)



RN 143867-30-5 CAPLUS
CN Piperidine, 1-[(4-chlorophenyl)methyl]-4-(1-naphthalenyl)- (9CI) (CA INDEX NAME)

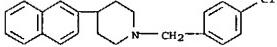


RN 143867-32-7 CAPLUS
CN Piperidine, 4-(2-naphthalenyl)-1-(phenylmethyl)- (9CI) (CA INDEX NAME)

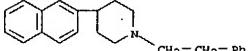


RN 143867-39-4 CAPLUS
CN Piperidine, 1-[(4-chlorophenyl)methyl]-4-(2-naphthalenyl)- (9CI) (CA INDEX NAME)

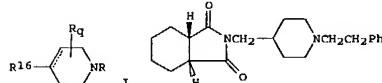
L4 ANSWER 17 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



RN 143867-41-8 CAPLUS
CN Piperidine, 4-(2-naphthalenyl)-1-(2-phenylethyl)- (9CI) (CA INDEX NAME)



L4 ANSWER 18 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN
GI



AB The title compds. (I; $R = (\text{CH}_2)_n\text{R}_2$; $R_1 = (\text{CH}_2)_m\text{R}_3$; R_2 is selected from 39 general benzo-fused phthalimido and analogous groups; $\text{R}_3 = \text{cycloalkyl}$; $\text{Ar} = (\text{un})\text{substituted Ph}$, naphthyl, pyridyl, pyrimidinyl, (iso)quinolyl; $\text{R}_{16} = H, OH, \text{alkoxy}, \text{acyloxy}$, alkyl, ($\text{un})\text{substituted (hetero)aryl}$; dashed line = optional bond; when said bond is present R_{16}

$= (\text{CH}_2)_n\text{R}_2$ and $q = 0$, otherwise $q = 1$; $m, p = 1-4$; $n = 0-4$) were prepared. Thus, 4-aminoethylpyridine was cyclocondensed with cis-1,2-cyclohexanecarboxylic anhydride and the product N-alkylated with BrCH₂CH₂Ph to give, after hydrogenation over PtO₂, title compound II which

inhibited isolation-induced aggressive behavior in mice when administered orally (no dose given).

AN 1991:535930 CAPLUS

DN 115:135930

TI Preparation of (phthalimidoalkyl)piperidines and analogs as psychotropic agents

IN Ciganek, Engelbert; Tam, Sang William; Wright, Ann Sorrentino

PA du Pont de Nemours, E. I., and Co., USA

SO PCT Int. Appl., 113 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 3

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9106297	A1	19910516	WO 1990-US6102	19901029
W: AU, CA, FI, HU, JP, KR, NO, SU				
IL 96144	A1	19940624	IL 1990-96144	19901028
AU 9066265	A1	19910531	AU 1990-66265	19901029
AU 655406	B2	19941222		
ZA 9000641	A	19920624	ZA 1990-8641	19901029
EP 497843	A1	19920812	EP 1990-916143	19901029
R: AT, BE, CH, DE, DK, ES, PR, GB, GR, IT, LI, LU, NL, SE				
JP 06504980	T2	19940609	JP 1990-515062	19901029
NO 9201594	A	19920424	NO 1992-1594	19920424
FI 9201856	A	19920424	FI 1992-1856	19920424

PRAI US 1989-428097
US 1990-602024
WO 1990-US6102
OS MARPAT 115:135930
135903-59-2P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use);

11/08/04

L4 ANSWER 18 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)
BIOL (Biological study); PREP (Preparation); USES (Uses)
(prep. of, as psychotropic agent)

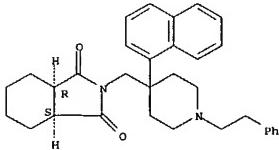
RN 135903-59-2 CAPLUS

CN 1H-Isoindole-1,3(2H)-dione, hexahydro-2-[(4-(1-naphthalenyl)-1-(2-phenylethyl)-4-piperidinyl)methyl]-, (3aR,7aS)-rel-, (2E)-2-butenedioate (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 135903-58-1
CMP C22 H26 N2 O2

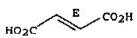
Relative stereochemistry.



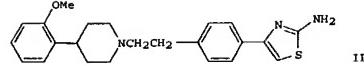
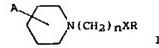
CM 2

CRN 110-17-8
CMP C4 H4 O4

Double bond geometry as shown.



L4 ANSWER 19 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN
GI



AB The title compds. [I; A = (un)substituted Ph, tolyl, naphthyl; R = tolyl, 5-oxindolyl, 2-amino-5-thiazolylphenyl, 2-methyl-4-oxo-4H-pyrido[1,2-a]pyrimidin-3-yl, (un)substituted Ph, etc.; X = O, S, bond; n = 2-4] were prepared Thus, the Grignard reagent prepared from 2-BrC6H4OMe

was condensed with 1-benzyl-4-piperidone and the product converted in 2 steps to 4-(2-methoxyphenyl)piperidine which was refluxed with 4-[4-(2-chloroethyl)phenyl]-2-aminothiazole in MeCOCH2CHMe2 containing Na2CO3 to give title compound II which had IC50 of 36.3 nM against N-propylmorphine binding at dopamine-2 receptors in vitro.

AN 1990:611652 CAPLUS

DN 113:211852

TI Preparation of N-(aralkyl)arylpiperidines and analogs as neuroleptic agents#

IN Nagel, Arthur Adam

PA Pfizer Inc., USA

SO Eur. Pat. Appl., 16 pp.

CODEN: EPXXDW

DT Patent

LA English

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI EP 372776	A2	19900613	EP 1989-312269	19891127
EP 372776	A3	19911023		
EP 372776	B1	19960925		
R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE WO 9006303			WO 1988-US4300	19881202
W: FI, HU, NO, RO, SU, US	A1	19900614		
HU 59127	A2	19920428	HU 1989-2324	19881202
HU 207310	B	19930329		
AT 143366	E	19961015	AT 1989-312269	19891127
ES 2092475	T3	19961201	ES 1989-312269	19891127
CA 2004249	AA	19900602	CA 1989-2004249	19891130
CA 2004249	C	19960917		
JP 02275853	A2	19901109	JP 1989-312235	19891130
JP 07010850	B4	19950208		
DK 8906068	A	19900718	DK 1989-6068	19891201
ZA 8909192	A	19910731	ZA 1989-9192	19891201

L4 ANSWER 19 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

AU 8945869 A1 19900628 AU 1989-45869 19891204
AU 633858 B2 19930211

US 5152206 A 19921006 US 1990-566435 19900726

NO 9003383 A 19901001 NO 1990-3383 19900801

NO 175257 B 19940613

NO 175257 C 19940921

FI 95465 B 19951031 FI 1990-3829 19900801

FI 95465 C 19960212

US 5294619 A 19940315 US 1992-921878 19920729

PRAI WO 1988-US4300 19881202

US 1990-566435 19900726

OS CASREACT 113:211852; MARPAT 113:211852

IT 130305-57-6P RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation and reaction of, in preparation of neuroleptic agents)

RN 130305-57-6 CAPLUS

CN 4-Piperidinol, 4-(1-naphthalenyl)-1-(phenylmethyl)- (9CI) (CA INDEX NAME)

NAME



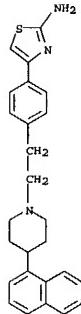
IT 130305-39-4P 130305-41-8P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, as neuroleptic agent)

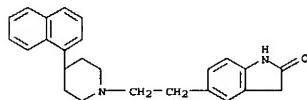
RN 130305-39-4 CAPLUS

CN 2-Thiazolamine, 4-[(2-[4-(1-naphthalenyl)-1-piperidinyl]ethyl)phenyl]- (9CI) (CA INDEX NAME)

L4 ANSWER 19 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



RN 130305-41-8 CAPLUS
CN 2H-Indol-2-one,
1,3-dihydro-5-[2-[4-(1-naphthalenyl)-1-piperidinyl]ethyl]- (9CI) (CA INDEX NAME)

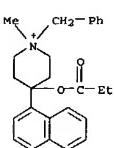


11/08/04

L4 ANSWER 20 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN
 AB Analogs of the prodine analgesics were prepared and tested for analgesic activity. A good correlation seems to exist between the energy level of the highest occupied mol. orbital and biol. activity. The energy level of the highest occupied mol. orbital of the aryl moiety of these analogs may permit a charge transfer interaction between the aryl groups of the analgesic mols. and their receptors with the aryl groups acting as charge donors.

AN 1980:604417 CAPLUS
 DN 93:204417
 TI Electronic study of receptor binding of analgesic aryl moiety. II: prodine analogs

AU Razzak, Khalid Sabih A.; Hamid, Khawla A.
 CS Coll. Pharm., Univ. Baghdad, Baghdad, Iraq
 SO Journal of Pharmaceutical Sciences (1980), 69(7), 796-9
 CODEN: JPMSE, ISSN: 0022-3549
 DT Journal
 LA English
 IT 75446-52-5P 75446-54-7P
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
 (preparation and analgesic activity of, energy level of HOMO in relation to)
 RN 75446-52-5 CAPLUS
 CN Piperidinium, 1-methyl-4-(1-naphthalenyl)-4-(1-oxopropoxy)-1-(phenylmethyl)-, bromide (9CI) (CA INDEX NAME)



● Br⁻

RN 75446-54-7 CAPLUS
 CN Piperidinium, 1-methyl-4-(2-naphthalenyl)-4-[(phenylacetyl)oxy]-1-(phenylmethyl)-, bromide (9CI) (CA INDEX NAME)

L4 ANSWER 21 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN
 GI For diagram(s), see printed CA issue.
 AB The synthesis of N-phenethyl-4-heteroaryl-4-piperidinols and related compds. by addition of Li aryls to N-phenethyl-4-piperidones was described.
 Treatment of the alcs. with Ac20-CSH5N gave either esters or, more commonly, an elimination product. Direct acylation of Li aryl-piperidone complexes gave esters which, in certain cases, were readily converted into ether salts with excess alc. HCl. These results were interpreted in terms of the electronic character of the 4-aryl substituent. The analgesic activities in mice of various compds. were given and the results discussed.

in terms of isosteric replacement of Ph in analgesics. Freshly distilled furan (1.7 g.) and PhLi in Et2O (from 0.43 g. Li and 4.75 g. PhBr) refluxed 2 hrs., cooled in an ice bath, treated with 5.4 g. CH2.CHR.CHOH.CH2.NCH2CH2Ph (I) (R = Me), the mixture stirred 30 min. at room temperature, added to crushed ice and excess AcOH, stored at 5°, the separated solid washed with Et2O, treated with aqueous NH3, extracted with Et2O, the extract dried, and the Et2O removed gave 4.2 g. crude CH2.CHR.CHOH.CH2.NCH2CH2Ph (II) (R = Me, Ar = 2-furyl) (III), oil, converted into III HCl salt containing 1 mole EtOH crystallization, m. 187-8° (decomposition) (melters at 92°), equivalent weight 365. Crude II (3.1 g.), 1 ml. (EtCO)2O (IV), and 4 ml. CSH5N refluxed 3 hrs., concentrated in vacuo residue converted to the HCl salt, and the product recrystd. from EtOH-Et2O gave CH2.CHR.CHOH.CH2.NCH2CH2Ph (for the double bond may be in the 4-5 position) (V) (R = Me, Ar = 2-furyl) HCl salt (VI), m. 204-5° (decomposition). The complex from 5.4 g. I (R = Me) and furyllithium (prepared as above) cooled in an ice bath, treated with 3 ml. Ac20 in C6H6, the mixture stirred 30 min. at room temperature, added to crushed ice and excess AcOH, and worked up as above gave 5.3 g. crude CH2.CHR.CHOH(CO).CH2.CHR.NCH2CH2Ph (VII) (R = Me, Ar = 2-furyl) (VIII), equivalent weight 336, ν 1738 cm⁻¹, converted with excess alc. HCl to CH2.CHR.CHOH(CO).CH2.CHR.NCH2CH2Ph (IX) (R = Me, Ar = 2-furyl) HCl salt, m. 181-2° (decomposition) (EtOH-Et2O). I (R = Me) (21.7 g.) treated with thiencyllithium (prepared from 8.4 g. thiophene, 19 g. PhBr, and 1.7 g. Li, as described above) and worked up as above gave 22.5 g. II (R = Me, Ar = 2-thienyl) (X), m. 91° [petr. ether (b. 40-60°)-Me2CO] X treated with IV-CSH5N as above gave V (R = Me, Ar = 2-thienyl) HCl salt (XI) m. 208-10° (decomposition). Direct treatment of the complex from I (R = Me) and thiencyllithium with Ac20 and work-up of the mixture as above gave crude VII (R = Me, Ar = 2-thienyl) (XII), converted by neutralization with alc. HCl into XII HCl salt, m. 213-14° (decomposition) (EtOH-Et2O), equivalent weight 384, ν 1741 cm⁻¹. Crude XII with excess alc. HCl gave IX

(R = Me, Ar = 2-thienyl) (XIII) HCl salt, m. 220-22 (decomposition) (EtOH-Et2O); XIII picrate m. 149-50°, equivalent weight 556. I (R = Me) (15 g.) treated with 1-naphthyllithium (from 1.4 g. Li and 21 g. 1-C10H7Br) and worked up as usual gave 21 g. II (R = Me, Ar = 1-naphthyl) (XIV); HCl salt m. 266° (EtOH). Direct acylation of I (R = Me)-1-naphthyllithium complex with Ac20 as above and treatment of the

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L4 ANSWER 20 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

the highest occupied mol. orbital of the aryl moiety of these analogs may permit a charge transfer interaction between the aryl groups of the analgesic mols. and their receptors with the aryl groups acting as charge donors.

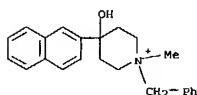
AN 1980:604417 CAPLUS
 DN 93:204417
 TI Electronic study of receptor binding of analgesic aryl moiety. II: prodine analogs

AU Razzak, Khalid Sabih A.; Hamid, Khawla A.
 CS Coll. Pharm., Univ. Baghdad, Baghdad, Iraq
 SO Journal of Pharmaceutical Sciences (1980), 69(7), 796-9
 CODEN: JPMSE, ISSN: 0022-3549
 DT Journal
 LA English
 IT 75446-52-5P 75446-54-7P
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
 (preparation and analgesic activity of, energy level of HOMO in relation to)
 RN 75446-52-5 CAPLUS
 CN Piperidinium, 4-hydroxy-1-methyl-4-(2-naphthalenyl)-1-(phenylmethyl)-, bromide (9CI) (CA INDEX NAME)

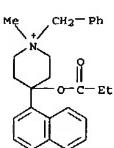


● Br⁻

IT 75446-46-7P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (preparation and esterification of)
 RN 75446-46-7 CAPLUS
 CN Piperidinium, 4-hydroxy-1-methyl-4-(2-naphthalenyl)-1-(phenylmethyl)-, bromide (9CI) (CA INDEX NAME)



● Br⁻



● Br⁻

RN 75446-54-7 CAPLUS
 CN Piperidinium, 1-methyl-4-(2-naphthalenyl)-4-[(phenylacetyl)oxy]-1-(phenylmethyl)-, bromide (9CI) (CA INDEX NAME)

L4 ANSWER 21 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)
 AB The synthesis of N-phenethyl-4-heteroaryl-4-piperidinols and related compounds by addition of Li aryls to N-phenethyl-4-piperidones was described.

Treatment of the alcs. with Ac20-CSH5N gave either esters or, more commonly, an elimination product. Direct acylation of Li aryl-piperidone complexes gave esters which, in certain cases, were readily converted into ether salts with excess alc. HCl. These results were interpreted in terms of the electronic character of the 4-aryl substituent. The analgesic activities in mice of various compounds were given and the results discussed.

in terms of isosteric replacement of Ph in analgesics. Freshly distilled furan (1.7 g.) and PhLi in Et2O (from 0.43 g. Li and 4.75 g. PhBr) refluxed 2 hrs., cooled in an ice bath, treated with 5.4 g. CH2.CHR.CHOH.CH2.NCH2CH2Ph (I) (R = Me), the mixture stirred 30 min. at room temperature, added to crushed ice and excess AcOH, stored at 5°, the separated solid washed with Et2O, treated with aqueous NH3, extracted with Et2O, the extract dried, and the Et2O removed gave 4.2 g. crude CH2.CHR.CHOH.CH2.NCH2CH2Ph (II) (R = Me, Ar = 2-furyl) (III), oil, converted into III HCl salt containing 1 mole EtOH crystallization, m. 187-8° (decomposition) (melters at 92°), equivalent weight 365. Crude II (3.1 g.), 1 ml. (EtCO)2O (IV), and 4 ml. CSH5N refluxed 3 hrs., concentrated in vacuo residue converted to the HCl salt, and the product recrystd. from EtOH-Et2O gave CH2.CHR.CHOH.CH2.NCH2CH2Ph (for the double bond may be in the 4-5 position) (V) (R = Me, Ar = 2-furyl) HCl salt (VI), m. 204-5° (decomposition). The complex from 5.4 g. I (R = Me) and furyllithium (prepared as above) cooled in an ice bath, treated with 3 ml. Ac20 in C6H6, the mixture stirred 30 min. at room temperature, added to crushed ice and excess AcOH, and worked up as above gave 5.3 g. crude CH2.CHR.CHOH(CO).CH2.CHR.NCH2CH2Ph (VII) (R = Me, Ar = 2-furyl) (VIII), equivalent weight 336, ν 1738 cm⁻¹, converted with excess alc. HCl to CH2.CHR.CHOH(CO).CH2.CHR.NCH2CH2Ph (IX) (R = Me, Ar = 2-furyl) HCl salt, m. 181-2° (decomposition) (EtOH-Et2O). I (R = Me) (21.7 g.) treated with thiencyllithium (prepared from 8.4 g. thiophene, 19 g. PhBr, and 1.7 g. Li, as described above) and worked up as above gave 22.5 g. II (R = Me, Ar = 2-thienyl) (X), m. 91° [petr. ether (b. 40-60°)-Me2CO] X treated with IV-CSH5N as above gave V (R = Me, Ar = 2-thienyl) HCl salt (XI) m. 208-10° (decomposition). Direct treatment of the complex from I (R = Me) and thiencyllithium with Ac20 and work-up of the mixture as above gave crude VII (R = Me, Ar = 2-thienyl) (XII), converted by neutralization with alc. HCl into XII HCl salt, m. 213-14° (decomposition) (EtOH-Et2O), equivalent weight 384, ν 1741 cm⁻¹. Crude XII with excess alc. HCl gave IX

(R = Me, Ar = 2-thienyl) (XIII) HCl salt, m. 220-22 (decomposition) (EtOH-Et2O); XIII picrate m. 149-50°, equivalent weight 556. I (R = Me) (15 g.) treated with 1-naphthyllithium (from 1.4 g. Li and 21 g. 1-C10H7Br) and worked up as usual gave 21 g. II (R = Me, Ar = 1-naphthyl) (XIV); HCl salt m. 266° (EtOH). Direct acylation of I (R = Me)-1-naphthyllithium complex with Ac20 as above and treatment of the

and the mixt. worked up as usual gave 10 g. crude II (R = H, Ar = 2-picoly) (XXII) [di-HBr salt m. 220-5° (EtOH)], equiv. wt. 229. Direct acylation of the I (R = H)-2-picolyllithium complex with Ac20 gave VII (R = H, Ar = 2-picoly) (XXIII) [di-HBr salt m. 238° (EtOH)], equiv. wt. 253. I (R = Me) (15 g.) treated with 2-picolyllithium as before gave 16 g. II (R = Me, Ar = 2-picoly) (XXIV) [di-HBr salt m. 250° (EtOH)], equiv. wt. 237. XXIV with Ac20-CSH5N gave V (R = Me, Ar = 2-Ch2Ph) [HBr salt m. 212° (EtOH)], equiv. wt. 375. I (R = H) (8 g.) added to 2-picolyllithium (prep'd. by metallation of 7.5 g. 2-picoline with the mixt. worked up as usual gave 17.5 g. II (R = H, Ar = 2-Ch2Ph) (XIX) HBr salt, m. 218° (EtOH), equiv. wt. 378, which gave with Ac20-CSH5N VII (R = H, Ar = 2-Ch2Ph) (XIXa) HBr salt, m. 241° (EtOH), equiv. wt. 419, and with IV-CSH5N the EtCO ester (XX) [HBr salt m. 214° (EtOH), equiv. wt. 434]. I (R = Me) (20 g.) treated in the usual manner with PHCH2MgBr gave 23 g. II (R = Me, Ar = CH2Ph) (XXI); HBr salt m. 235° (EtOH). XXI with IV-CSH5N gave V (R = Me, Ar = 2-Ch2Ph) [HBr salt m. 212° (EtOH)], equiv. wt. 375. I (R = H) (8 g.) added to 2-picolyllithium (prep'd. by metallation of 7.5 g. 2-picoline with the mixt. worked up as usual gave 10 g. crude II (R = H, Ar = 2-picoly) (XXII) [di-HBr salt m. 220-5° (EtOH)], equiv. wt. 229.

Direct acylation of the I (R = H)-2-picolyllithium complex with Ac20 gave VII (R = H, Ar = 2-picoly) (XXIII) [di-HBr salt m. 238° (EtOH)], equiv. wt. 253. I (R = Me) (15 g.) treated with 2-picolyllithium as before gave 16 g. II (R = Me, Ar = 2-picoly) (XXIV) [di-HBr salt m. 250° (EtOH)], equiv. wt. 237. XXIV with Ac20-CSH5N gave, probably, V (R = Me, Ar = 2-picoly); di-HBr salt m. 240° (EtOH). The analgesic activities of the compds. reported were as follows [compd., analgesic activity (morphine = 100), and analgesic activity (morphine = 100) of 4-Ph analog given]: III, <30, 70; X, 38, 70; XII, 63, 385; XVI, 52, 70; XVII, 30, 385; XVIII, 44, 430; XIV, 38, 70; XV, <30, 35; XXI, 25, 70; XIX, 38, 35; XIa, <30, 633; XX, <30, 346; XII, 14, 35; XXIII, 633; VI, <30, 22; XI, <30, 22.

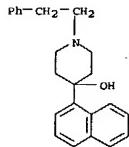
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 TI N-Phenethyl-4-heteroaryl-4-piperidinols and related compounds
 AU Beckett, A. H.; Casy, A. F.; Phillips, P. M.
 CS Chelsea Coll. Sci. & Technol., London
 SO Journal of Medicinal & Pharmaceutical Chemistry (1960), 2, 245-61
 CODEN: JMPCAS; ISSN: 0095-9065

DT Journal
 LA Unavailable
 OS CASREACT 54:118264
 IT 102559-08-0, 4-Piperidinol, 4-(1-naphthyl)-1-phenethyl-1-C10H7Br and worked up as usual gave 21 g. II (R = Me, Ar = 1-naphthyl) (XIV); HCl salt m. 266° (EtOH). Direct acylation of I (R = Me)-1-naphthyllithium complex with Ac20 as above and treatment of the

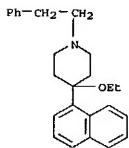
10/722, 114

11/08/04

L4 ANSWER 21 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)
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 4-ethoxy-4-(1-naphthyl)-1-phenethyl-, hydrochloride
 (prep. of)
 RN 102559-08-0 CAPLUS
 CN 4-Piperidinol, 4-(1-naphthyl)-1-phenethyl- (6CI) (CA INDEX NAME)



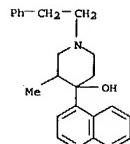
RN 102875-20-7 CAPLUS
 Piperidine, 4-ethoxy-4-(1-naphthyl)-1-phenethyl-, hydrobromide (6CI) (CA INDEX NAME)



● HBr

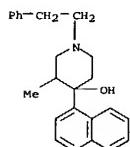
RN 113751-76-1 CAPLUS
 4-Piperidinol, 3-methyl-4-(1-naphthyl)-1-phenethyl-, hydrochloride (6CI)
 (CA INDEX NAME)

L4 ANSWER 21 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



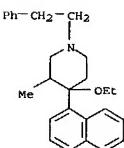
● HCl

RN 113751-77-2 CAPLUS
 4-Piperidinol, 3-methyl-4-(1-naphthyl)-1-phenethyl- (6CI) (CA INDEX NAME)



RN 122802-92-0 CAPLUS
 3-Piperidine, 4-ethoxy-4-(1-naphthyl)-1-phenethyl-, hydrochloride (6CI)
 (CA INDEX NAME)

L4 ANSWER 21 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



● HCl

L4 ANSWER 22 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN
 AB N-Phenethyl-4-piperidone (I) (8.12 g.) and PhLi from 7.85 g. PhBr and 0.7 g. Li gave N-phenethyl-4-hydroxy-4-phenylpiperidine (II), m.

102-3°. Phenethylamine (121 g.) neutralized with concentrated HCl, 118 g. α-methylstyrene, and 200 g. formalin were heated 3 hrs. at 80°, the mixture refluxed 5 hrs., cooled, washed with benzene, the aqueous layer made alkaline, extracted with benzene, the extract dried, solvent partially removed, hexane added to a faint cloud point and the mixture cooled to

give II; HCl salt of 4-Ac derivative m. 214-15.5°; HCl salt of 4-EtCO derivative m. 201-2°; HCl salt of 4-PrCO derivative m. 195.5°.

N-Phenethyl-3-methyl-4-piperidone (III) (21 g.) and PhLi from 18.9 g. PhBr and 1.66 g. Li gave N-phenethyl-3-methyl-4-hydroxy-4-phenylpiperidine (IV)

(mixture of isomers), one isomer, m. 106-7°; HCl salt of 4-Ac derivative m. 214-15°; HCl salt of 4-EtCO derivative m. 179.5-80.5°

(α-isomer), and 203.5-4.5° (β-isomer). I (16.5 g.) and α-naphthyllithium (V) from 25 g. α-naphthyl bromide (VI) and 1.7 g. Li gave N-phenethyl-4-hydroxy-4-(α-naphthyl)piperidine, m.

173°. III (15 g.) and V from 21 g. VI and 1.4 g. Li gave N-phenethyl-3-methyl-(4-α-naphthyl)-4-hydroxypiperidine-HCl, m.

266°. I (17.5 g.) and PhCH₂MgBr from 22 g. PhCH₂Cl and 4.3 g. Mg gave N-phenethyl-4-hydroxy-4-benzylpiperidine-HBr, m. 218°; HBr salt of 4-Ac derivative m. 241°; HBr salt of 4-EtCO derivative m.

214°. I (30 g.) and BuLi from 28.7 g. BuBr and 3.6 g. Li gave N-phenethyl-4-hydroxy-4-butylpiperidine, m. 53-4°.

AN 1960:110647 CAPLUS

DN 54:110647

OREP 54:21137d-g

TI Amino alcohols and esters

IN Beckett, Arnold H.

DT Patent

LA Unavailable

PAN CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI GB 832491 19600413 GB

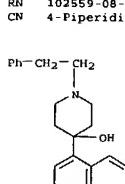
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113751-76-1, 4-Piperidinol, 3-methyl-4-(1-naphthyl)-1-phenethyl-, hydrochloride

(preparation of)

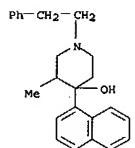
RN 102559-08-0 CAPLUS

CN 4-Piperidinol, 4-(1-naphthyl)-1-phenethyl- (6CI) (CA INDEX NAME)



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L4 ANSWER 22 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)
RN 113751-76-1 CAPLUS
CN 4-Piperidinol, 3-methyl-4-(1-naphthyl)-1-phenethyl-, hydrochloride (6CI)
(CA INDEX NAME)



● HCl

11/08/04

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DICTIONARY FILE UPDATES: 7 NOV 2004 HIGHEST RN 776240-21-2

TSCA INFORMATION NOW CURRENT THROUGH MAY 21, 2004

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Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:
<http://www.cas.org/ONLINE/DBSS/registryss.html>

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L5 O THIENYL/CN

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=> s thiophene
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=> s thiophene/cn

$\Rightarrow \exists d$

11/08/04

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TSCA INFORMATION NOW CURRENT THROUGH MAY 21, 2004

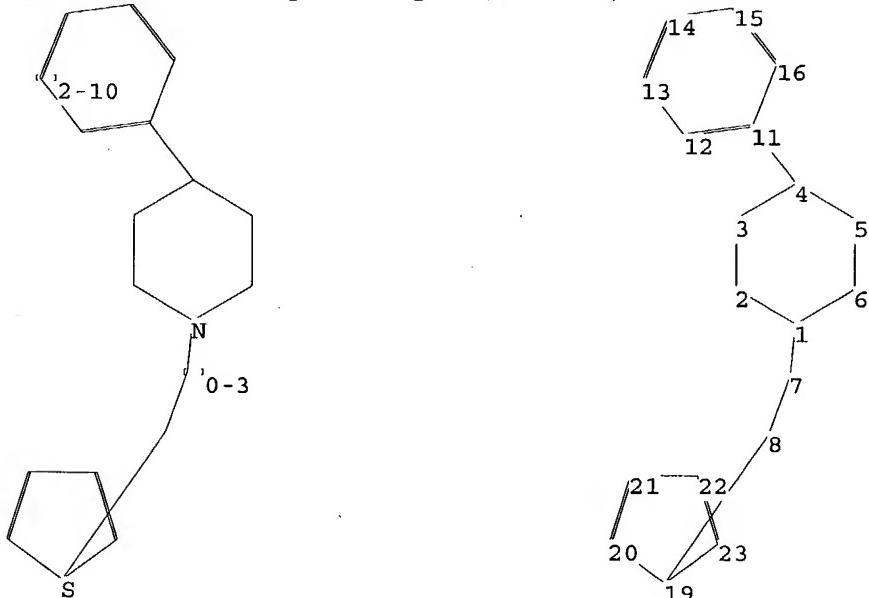
Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:
<http://www.cas.org/ONLINE/DBSS/registryss.html>

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11/08/04

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ring nodes :  
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ring bonds :  
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19-23 20-21 21-22 22-23  
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normalized bonds :  
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Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:CLASS 8:CLASS 11:Atom 12:Atom
13:Atom 14:Atom 15:Atom 16:Atom 19:Atom 20:Atom 21:Atom 22:CLASS 23:CLASS

L9 STRUCTURE UPLOADED

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L9 STR

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

Structure attributes must be viewed using/STN Express query preparation.

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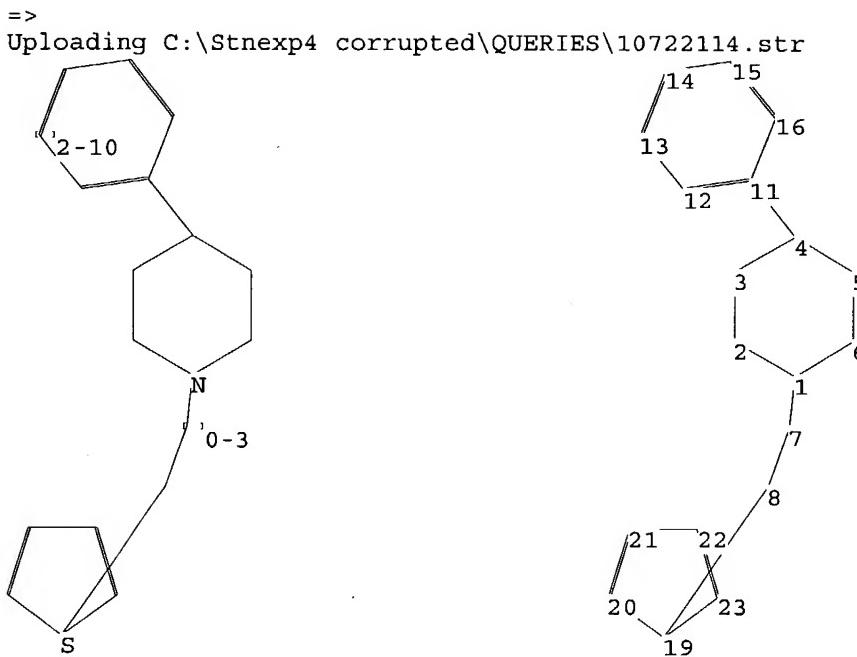
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11/08/04



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19-23 20-21 21-22 22-23
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Match level :
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L12 STR

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

10/722,114

11/08/04

Structure attributes must be viewed using STN Express query preparation.

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SEARCH TIME: 00.00.01

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ENTRY SESSION
FULL ESTIMATED COST 311.68 609.90

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS) SINCE FILE TOTAL
ENTRY SESSION
CA SUBSCRIBER PRICE 0.00 -15.40

FILE 'REGISTRY' ENTERED AT 14:12:24 ON 08 NOV 2004
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
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Property values tagged with IC are from the ZIC/VINITI data file
provided by InfoChem.

STRUCTURE FILE UPDATES: 7 NOV 2004 HIGHEST RN 776240-21-2
DICTIONARY FILE UPDATES: 7 NOV 2004 HIGHEST RN 776240-21-2

TSCA INFORMATION NOW CURRENT THROUGH MAY 21, 2004

Please note that search-term pricing does apply when
conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

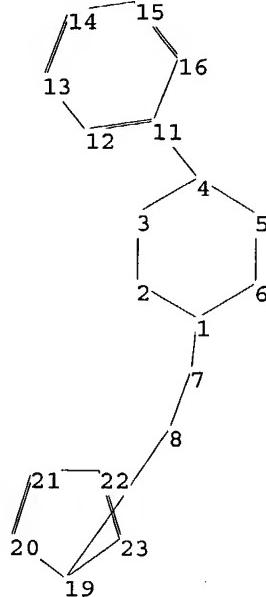
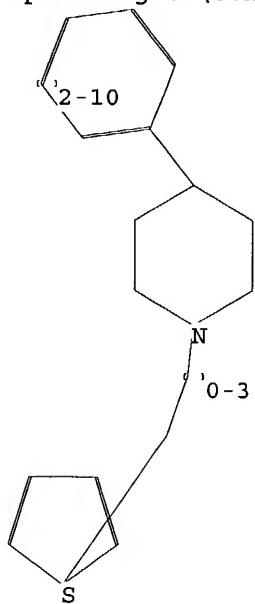
Experimental and calculated property data are now available. For more
information enter HELP PROP at an arrow prompt in the file or refer
to the file summary sheet on the web at:

11/08/04

<http://www.cas.org/ONLINE/DBSS/registryss.html>

=>

Uploading C:\Stnexp4 corrupted\QUERIES\10722114.str



chain nodes :

7 8

ring nodes :

1 2 3 4 5 6 11 12 13 14 15 16 19 20 21 22 23

chain bonds :

1-7 4-11 7-8 8-19

ring bonds :

1-2 1-6 2-3 3-4 4-5 5-6 11-12 11-16 12-13 13-14 14-15 15-16 19-20
19-23 20-21 21-22 22-23

exact/norm bonds :

1-2 1-6 1-7 2-3 3-4 4-5 5-6 8-19 19-20 19-23 20-21 21-22 22-23

exact bonds :

4-11 7-8

normalized bonds :

11-12 11-16 12-13 13-14 14-15 15-16

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:CLASS 8:CLASS 11:Atom 12:Atom
13:Atom 14:Atom 15:Atom 16:Atom 19:Atom 20:Atom 21:Atom 22:CLASS 23:CLASS

L15 STRUCTURE UPLOADED

=> d 115

L15 HAS NO ANSWERS

L15 STR

10/722,114

11/08/04

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

Structure attributes must be viewed using STN Express query preparation.

=> s 115 ful

FULL SEARCH INITIATED 14:12:46 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 2 TO ITERATE

100.0% PROCESSED 2 ITERATIONS

0 ANSWERS

SEARCH TIME: 00.00.01

L16 0 SEA SSS FUL L15

=> logoff y

COST IN U.S. DOLLARS

SINCE FILE ENTRY	TOTAL SESSION
155.42	765.32

FULL ESTIMATED COST

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE ENTRY	TOTAL SESSION
0.00	-15.40

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STN INTERNATIONAL LOGOFF AT 14:13:04 ON 08 NOV 2004